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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/883,833	06/18/2001	Keiichi Mori	01367/LH	9961

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EXAMINER	
HENN, TIMOTHY J	

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/883,833	MORI ET AL.	
	Examiner	Art Unit	
	Timothy J Henn	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) *26-28* is/are withdrawn from consideration.

5)☒ Claim(s) *10-12 and 20-22* is/are allowed.

6)☒ Claim(s) *1-7,9,13-18 and 23-25* is/are rejected.

7)☒ Claim(s) *8 and 19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/18/03, 2/1/02, 9/24/01*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 26-28 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 31 August 2004.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 13, 15, 23 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Matusda (JP 2000-138862).

[claim 13]

Regarding claim 13, Matsuda discloses an imaging apparatus comprising: an image pickup device (Figure 1, Item 4); designating means for designating one of a first gradation mode, a second gradation mode and a third gradation mode (Figures 2 and 3; Paragraph 0022); converting means for converting the original image signal from the

image pickup device to an output signal in accordance with the designated mode, the output signal having a first, second or third gradation corresponding to first, second or third gradation curves (Figure 3)when the first, second or third gradation modes are designated respectively (Figure 1, Item 4; Figure 3; Paragraph 0018); and wherein the first, second and third gradation curves intersect one another at substantially the same point.

[claim 15]

Regarding claim 15, Matsuda discloses first, second and third gradation curves which have a knee point in a region having a signal value larger than the signal value of the intersection of the property curves (Figure 3).

[claims 23 and 25]

Claims 23 and 25 are method claims corresponding to apparatus claims 13 and 15. Therefore, claims 23 and 25 are analyzed and rejected as previously discussed with respect to claims 13 and 15.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-4, 6, 7, 9 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (JP 2000-138862) in view of Hung (US 6,583,820).

[claim 1]

Regarding claim 1, Matsuda discloses an imaging apparatus comprising: an image pickup device (Figure 1, Item 4); designating means for designating one of a first gradation mode and a second gradation mode (Figures 2 and 3; Paragraph 0022); converting means for converting the original image signal from the image pickup device to an output signal in accordance with the designated mode, the output signal having a first or second gradation when the first or second gradation modes are designated respectively (Figure 1, Item 4; Figure 3; Paragraph 0018). However, Matsuda lacks adjusting means for adjusting a level of the original signal inputted to the converting means in accordance with the designated mode, and maintaining an average level of the output signal outputted form the converting means at a substantially constant level even in the designation of the first and second gradation modes.

Hung teaches an imaging apparatus in which the exposure amount and the gradation characteristic are correlated with each other so that the average luminance of the output signal has a standard luminance (c. 7, ll. 37-43). It is also noted that Matsuda teaches that it is desirable to allow the user to specify a predetermined gradation characteristic so as to create images with gradation according to the intention of the user (Paragraph 0009). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the user to set a predetermined gradation characteristic and to calculate an exposure value which is

correlated to that gradation characteristic so as to output an image with an average luminance corresponding to a standard luminance and a gradation corresponding to a users intentions.

[claim 2]

Regarding claim 2, Matsuda discloses the use of analog circuitry to change the gradation properties of the image in relation to a gradation property curve (Figure 3; Paragraph 0018). In order to perform this operation, amplifying means for amplifying the original image using adjustable gains as designated by the gradation property designation means must inherently be included in the camera of Matsuda.

[claim 3]

Regarding claim 3, Hung teaches controlling means for controlling an exposure amount of the photographic subject image in accordance with a gradation characteristic. In combination with the manual gradation mode setting of Matsuda, a controlling means for setting the exposure in accordance with a designated gradation mode is formed, see claim 1.

[claim 4]

Regarding claim 4, first and second exposure target values would inherently be set when the first and second gradation modes (Figure 3) or Matsuda are set in order to maintain a standard luminance signal output.

[claim 6]

Regarding claim 6, Matsuda further discloses a third gradation mode (Figure 3) in which a output image signal can be outputted using a third gradation curve. In the

combination of Matsuda, an average luminance level would inherently be output regardless of which gradation mode is selected.

[claim 7]

Regarding claim 7, Matsuda discloses first, second and third gradation curves for converting the image corresponding to the first, second and third gradation modes (Figure 3).

[claim 9]

Regarding claim 9, the first and second gradation curves are applied in relation to the output image signal in a predetermined level range (i.e. y-axis of Figure 3) with respect to an input of the original image signal (i.e. x-axis of Figure 3).

[claims 16, 17 and 18]

Claims 16, 17 and 18 are method claims corresponding to apparatus claims 1, 3 and 7 respectively. Therefore, claims 16, 17 and 18 are analyzed and rejected as previously discussed with respect to claims 1, 3 and 7.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (JP 2000-138862) in view of Hung (US 6,583,820) as applied to claim 3 above, and further in view of Kawai et al. (US 6,141,047).

[claim 5]

Regarding claim 5, Matsuda in view of Hung discloses correlating an exposure value to a selected gradation mode, however does not disclose the specifics of how this is performed. However, it is known in the art to complete automatic exposure control on

an image signal after the image signal has been processed for changing its gradation characteristics, for example see Kawai (Figure 2A). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to analyze an image signal for calculation of a photometric value which as been processed for gradation correction corresponding to a selected gradation mode in order to perform automatic exposure control so as to easily control the output level of the final image.

8. Claims 14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matusda (JP 2000-138862).

[claim 14]

Regarding claim 14, Matsuda does not specifically disclose curves which intersect at a point corresponding to 18% to 20% of a maximum signal level in a value on an input side of a gradation converting property. However, it is noted that Matsuda teaches allow a user to set a gradation property in accordance with the user's intentions (Paragraph 0009). Official Notice is taken that it is well known in the art that multiple gradation curves can be created which intersect at any value between zero and a maximum value. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use curves which intersect at a point between 18% to 20% of an input maximum value if it corresponded to the user's intentions.

[claim 24]

Claim 24 is a method claim corresponding to apparatus claim 14. Therefore, claim 24 is analyzed and rejected as previously discussed with respect to claim 14.

Allowable Subject Matter

9. Claims 10-12 and 20-22 allowed.

[claims 20-22]

The following is a statement of reasons for the indication of allowable subject matter: Regarding claims 20-22 the prior art does not teach an apparatus or method which converts an image using first or second gradation property curves and adjusts the output image to have an average level of substantially a constant level, wherein the first and second gradation property curves intersect at a certain target value and the target value substantially corresponds to the average output level of the output image signal as claimed.

10. Claims 8 and 19 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

[claims 8 and 19]

Regarding claims 8 and 19 the prior art does not teach an apparatus or method which converts an image using first or second gradation property curves and adjusts the output image to have an average level of substantially a constant level, wherein the first and second gradation property curves intersect at a certain target value and the target value substantially corresponds to the average output level of the output image signal as claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J Henn whose telephone number is (703) 305-8327 or (571) 272-7310 after 28 February 2005. The examiner can normally be reached on M-F 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJH
1/23/2005

TUAN HO
PRIMARY EXAMINER